

azido, amino, halogen, alkylthio, oxo, acyl, acylalkyl, carboxy esters, carboxyl, carboxamido, nitro, acyloxy, aminoalkyl, alkylaminoaryl, alkylaryl, alkylaminoalkyl, alkoxaryl, arylamino, aralkylamino, alkylsulfonyl, carboxamidoalkylaryl, carboxamidoaryl, hydroxyalkyl, haloalkyl, alkylaminoalkylcarboxy, aminocarboxamidoalkyl, alkoxyalkyl, perhaloalkyl, arylalkyloxyalkyl, and the like.

1. A system, comprising:
  - a source of electromagnetic radiation associated with a consumer electronic device;
  - a sensor associated with the consumer electronic device; and
  - an emissive species capable of producing a detectable signal by the sensor, the detectable signal having one or more detectable delayed emissions.
2. A method, comprising:
  - using a consumer electronic device to determine an identity or characteristic of a chemical/biological species, wherein the consumer electronic device comprises a source of a spectrum of electromagnetic radiation; and
  - exposing an emissive species to the spectrum of electromagnetic radiation such that the emissive species produces a detectable emission which corresponds to the identity or characteristic of the chemical/biological species and which is detectable by the consumer electronic device.
3. A method as in claim 1, wherein one or more emissive species are excited and a smartphone detects a steady-state photon emission event and a non-steady-state emission event or optionally a non-steady-state photon emission event.
4. A method as in claim 3, wherein a first portion of the electromagnetic radiation spectrum comprises a wavelength of between 425 nm and 475 nm and wherein a second portion of the electromagnetic radiation spectrum comprises a wavelength of between 525 nm and 725 nm.
5. A method as in claim 1, wherein the detectable signal comprises one or more delayed emissions of greater than or equal to 10 nanoseconds.
6. A method as in claim 1, wherein at least one emission is selected from the group consisting of subtractive color,

reflected/scattered color, chemiluminescence, prompt-fluorescence, delayed-fluorescence, prompt-phosphorescence, or delayed-phosphorescence.

7. A method or system as in claim 1, wherein the source of electromagnetic radiation comprises an LED component.
8. A method or system as in claim 1, further comprising a rolling shutter mechanism associated with the method.
9. A method or system as in claim 1, wherein the emissive material absorbs light emitted from a smartphone.
10. A method or system as in claim 1, wherein the emissive material absorbs light at a wavelength of 440 nm or higher.
11. A method or system as in claim 1, wherein the detectable signal comprises subtractive color, reflected color, chemiluminescence, prompt-fluorescence, delayed-fluorescence, prompt-phosphorescence, or delayed-phosphorescence emission.
12. A method or system as in claim 1, wherein the emissive material comprises a TADF emission.
13. A method or system as in claim 1, wherein the emissive material comprises an organometallic compound.
14. A method or system as in claim 1, wherein the emissive material comprises a metallorganic material.
15. A method or system as in claim 1, wherein the emissive material comprises Europium complex.
16. A method or system as in claim 1, wherein the emissive material comprises an organic molecule containing iodine or bromine atoms.
17. A method or system as in claim 1, wherein the emissive material is electronically coupled to or connected to a heavy atom.
18. A method or system as in claim 1, wherein the emissive material comprises metalloporphyrin.
19. A method or system as in claim 1, wherein the emissive material is excited by a white light source.
20. A method or system as in claim 1, wherein the emissive material is excited by an LED emitting between 440 and 700 nm.
- 21-34. (canceled)

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